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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/466,545	12/17/99	GAMEL	D 96794DIV3

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MICHAEL C ANTONE
KIRKPATRICK & LOCKHART LLP
1500 OLIVER BUILDING
PITTSBURGH PA 15222

EXAMINER	
SMITH, S	
ART UNIT	**PAPER NUMBER**
3729	11

DATE MAILED: 10/03/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/466,545	Applicant(s) GAMEL ET AL.	
	Examiner Sean P Smith	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *03 August 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1,3,5,7-9,44-54,61,70 and 74-82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1,3,5,7-9,44-54,61,70 and 74-82* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2,4,7,9* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Double Patenting

Claims 1,3,5,7-9,44-54,61-70,74-82 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 44,45,48-51,75-81 of copending Application No. 09/466483. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

DETAILED ACTION

1. Applicant's election of Species 1A including claims 48-51 in Paper No. 9 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 13, 44, 45, 75, 76, 78, 79 and 81 are now pending in this application. With respect to claim 53, It appears that claim 53 depend on a non elected species F, therefore claim 53 has been withdrawn from further consideration.

2. Claims 46, 47, 52-74 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to non elected species1B-F. Applicant reminder that non-elected above claims should be canceled.

3. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 48-51are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 48, the limitation "does not correspond to the predetermined –" is indefinite because the claim does not set forth any active, positive steps involved in the process. In addition, altering operating of a "transfer apparatus" or "a pick and place machine" on the process is not clear because it is not known how and when the transfer apparatus or a pick and place machine functioning associates with the claimed process.

Regarding claims 49, there is no link between the steps as set forth in the independent claims and the limitation of "causing a pick and place machine to pick a misalignment ".

Regarding claims 50, the limitation "aligning the misalignment component with the pick and place machine" is unclear and confusing, because there is no link between this step and the aligning the component including the alignment fiducial marker as previous claims.

Claim 51 recites the limitation "the component feed assembly " in line 2. There is insufficient antecedent basis for this limitation in the claim. Furthermore, there is no link between this step and the previous claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 13, 44, 48-51, 75, 76, 78 and 81 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent No. 5,805,421 to Livengood et al.

Livengood et al teach a method of attaching a component to a substrate comprising: forming a fiducial marker 35 on a component 40 (figure 3e, col. 6, lines 1-25), detecting the alignment of the fiducial marker on the component (abstract, lines 1-7, col.11, lines 28-31), comparing the detect alignment with a predetermined fiducial alignment to determined an alignment offset (col.7, lines 32-45), adjusting the position of the component 40 relative to the substrate 43 to eliminate the alignment offset (col.7, lines 30-43, col.8, lines 20-40), and attaching the component 40 to the substrate 43 (figures 3a-c). It is noted that integrating chip 40 and substrate 43 as shown in figures 3a-c of Livengood et al is represent the broadly claim method step of attaching the component to the substrate of the present invention. Note that figure 3c incorporated with discussion at col. 5, lines 10-21 of Livengood et al represent the broadly detecting method of the instant case.

Regarding claim 44, Livengood et al teach the aligning the component such that the marker matches a predetermined fiducial alignment (col. 5, lines 60-67, col. 6, lines 13-15).

Limitation of claims 75, 76, 78 and 81 are also met in view of the above discussion.

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 13, 44, 48-51, 75, 76, 78 and 81 are rejected under 35 U.S.C. 102(b) as discussed above in paragraph 7, or in the alternative, under 35 U.S.C. 103(a) as obvious over in view of US patent No 5,805,421 to Livengood et al in view of either US patent 5,003,692 to Izumi et al or US Patent No. 4,835,704 to Eichelberger et al.

In the alternative, if it is argued that Livengood et al do not teach the detecting of component on the substrate. With respect to the detecting steps. Izumi et al teach detecting and successively attaching an electrical component on the substrate (figure 1, abstract, lines 1-19) and/or Eichelberger et al teach the same concept including positioning and computing an offset for each of the integrated circuit on the substrate (abstract, col. 6, lines 39-68, col. 15, lines 53-63, col.16, lines 40-48). It would have been obvious to one ordinary skill in the art, at the time of the invention to have applied the method of detecting component on the substrate in light teaching of either Izumi et

al or Eichelberger et al in order to control the mounting process effectively as so to mount the part or component precisely and correctly onto the predetermined mounting position on the substrate.

Regarding claims 48-51, Izumi et al teach the pick and place machine with placement nozzle 3 operatively associated with the mounting method (figures 3-5). It would have been obvious to one ordinary skill in the art, at the time of the invention to utilize with the pick and place machine as taught by Izumi et al onto the aligning mounting method of Livengood et al in order to facilitate the mounting process. It is noted that the use of a pick and place machine for pick up and aligning of component are old and well known such limitation are held to be obvious and do not result in any difference in the *claimed* manufacturing process.

10/1/10
LEE YOUNG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700